

CLAIMS

WHAT IS CLAIMED IS:

1. An electronic steelpan drum, comprising:
 - an oval can-like outer housing with extended control function surface along one
5 side, said outer housing having a top circular sunken concave playing surface,
the height of said outer housing being of varying lengths for aesthetic
purposes;
 - a plurality of striking pads arranged on said concave playing surface, the area of
said striking pads generally associated with the frequency range of the
10 generated musical notes;
 - pressure sensors attached to the bottom side of each said striking pad for
determining the force applied to said striking pad by a pannist;
 - a central processing chip mounted on a circuit board enclosed within said outer
housing for electronically controlling the functions of said steelpan drum;
 - 15 one or more memory chips mounted on said circuit board and coupled to said
central processing chip for storing a variety of synthesized steelpan sounds
and a full range of musical, orchestral, and symphonic sounds to be
reproduced by said steelpan drum;
 - a plurality of function selection buttons mounted on said control function surface
20 along one side of said outer housing for selecting one of said variety of
synthesized steelpan sounds;
 - audio drivers mounted on said circuit board, the input of said audio drivers
coupled to an audio output of said central processing chip;
 - volume control equalizing circuitry coupled to the output of said audio drivers;
 - 25 one or more speakers mounted on said outer housing, said speakers driven from
said audio drivers;
 - a display mounted on said outer housing for use in plug-and-play setup and
controlling the basic elements of said steelpan drum; and
 - a power supply for providing DC power to said circuit board of said steelpan
30 drum, said power supply being sourced from a 110-volt AC outlet.

2. The steelpan drum of claim 1, said plurality of striking pads being further comprised of:

an outer ring of larger striking pads generally associated with lower frequency sounds;

a central ring of medium sized striking pads generally associated with mid-range frequency sounds; and

a central patch of at least four small striking pads generally associate with higher frequency sounds, which will be played with a pair of pansticks.

3. The steelpan drum of claim 1, wherein said outer housing has a convex bottom surface.

4. The steelpan drum of claim 1, wherein a free-standing pan stand is used to hold said steelpan drum, said free-standing stand having a slot means for receiving said steelpan drum.

5. The steelpan drum of claim 4, said outer housing further comprising an attaching means for hanging said steelpan drum on said free-standing pan stand.

6. The steelpan drum of claim 1, wherein said synthesized steelpan sounds are configurable from the group consisting of: tenor, double-seconds, guitar, cello, quadraphonic, tenor-base, and base.

7. The steelpan drum of claim 1, wherein said basic elements of said steelpan drum are selected from the group consisting of: sound type, configuration of striking pads, tone, rhythm, melody, harmony, tone color, and equalized volume.

8. The steelpan drum of claim 1, wherein said outer housing is constructed with materials from the group consisting of: molded plastic, lightweight metal, and wood.

9. The steelpan drum of claim 1, wherein said striking pads are made of hard rubber-type material.

10. The steelpan drum of claim 2, wherein said pansticks are made of hard rubber-type material.

11. The steelpan drum of claim 1, wherein a musical instrument digital interface (MIDI) is provided for interfacing said steelpan drum with other musical instruments.
- 5 12. The steelpan drum of claim 1, wherein said steelpan drum has an audio output jack mounted on said outer housing for coupling to an external audio amplifier.
- 10 13. The steelpan drum of claim 1, wherein a CD player/burner port is included on said housing and coupled to said central processing chip for mixing other musical, orchestral, and symphonic instrumental samples with the steelpan drum sound and for recording the output from said steelpan drum.
14. The steelpan drum of claim 1, wherein a series of equalizing volume control buttons are mounted on said outer housing for quick equalization of the sound from said steelpan drum by a musician.
- 15 15. The steelpan drum of claim 1, wherein said synthesized steelpan sounds are from the group consisting of: tenor (soprano), double tenor, double seconds, double guitar, triple guitar, four-pan (cello), quadraphonic, tenor bass, six bass, nine bass, and twelve bass.
- 20 16. An electronic steelpan drum with mixing capability, comprising:
an oval can-like outer housing with extended control function surface along one side, said outer housing having a top circular sunken concave playing surface, said outer housing having a convex back surface, the height of said outer housing being of varying lengths for aesthetic purposes, said outer housing further having an attaching means for hanging said steelpan drum on a pan stand;
25 a plurality of rubber striking pads arranged on said concave playing surface, said striking pads further comprising:
an outer ring of larger striking pads generally associated with lower frequency sounds;
a central ring of medium sized striking pads generally associated with mid-
30 range frequency sounds; and

a central patch of at least four small striking pads generally associate with higher frequency sounds, which are played with a pair of pansticks; pressure sensors attached to the bottom side of each said striking pad for determining the force applied to said striking pad by a pannist;

5 a central processing chip for electronically controlling the functions of said steelpan drum, said processing chip mounted on a circuit board enclosed within said housing;

one or more memory chips mounted on said circuit board and coupled to said central processing chip for storing a variety of synthesized steelpan sounds and a full range of musical, orchestral, and symphonic sounds to be reproduced by said steelpan drum;

10 a plurality of function selection buttons mounted on said control function surface of said housing for selecting one of said variety of synthesized steelpan sounds;

15 audio drivers mounted on said circuit board, the input of said audio drivers coupled to an audio output of said central processing chip; volume control equalizing circuitry coupled to the output of said audio drivers; one or more speakers mounted on said outer housing, said speakers driven from said audio drivers;

20 a CD burner/player port coupled to said central processing chip for mixing other musical, orchestral, and symphonic sounds with the steelpan drum sound and for recording the output from said steelpan drum;

a display mounted on said outer housing for use in plug-and-play setup and controlling the basic elements of said steelpan drum, said basic elements of said steelpan drum being selected from the group consisting of: sound type, configuration of striking pads, tone, rhythm, melody, harmony, tone color, and equalized volume;

25 an audio output jack mounted on said outer housing for use with an external audio amplifier;

a musical instrument digital interface (MIDI) provided on said outer housing for interfacing said steelpan drum with other musical instruments;
a series of equalizing volume control buttons mounted on said outer housing for quick equalization of the sound from said steelpan drum by a musician; and
5 a power supply for providing DC power to said circuit board of said steelpan drum, said power supply being sourced from a 110-volt AC outlet.

- 10 17. The steelpan drum of claim 16, wherein said synthesized steelpan sounds are from the group consisting of: tenor (soprano), double tenor, double seconds, double guitar, triple guitar, four-pan (cello), quadraphonic, tenor bass, six bass, nine bass, and twelve bass.
18. The steelpan drum of claim 16, said outer housing further comprising an attaching means for hanging said steelpan drum on said free-standing pan stand.
19. The steelpan drum of claim 16, wherein said pansticks are made of hard rubber-type material.

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